UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PACIFIC GAS AND ELECTRIC COMPANY,	)		
SAN DIEGO GAS & ELECTRIC COMPANY	)	Docket Nos.	EC96-19-003
and SOUTHERN CALIFORNIA EDISON	)		ER96-1663-003
COMPANY	)		
	)		
PACIFIC GAS & ELECTRIC COMPANY	)	Docket No.	ER97-2358-000
SAN DIEGO GAS & ELECTRIC COMPANY	)	Docket No.	ER97-2364-000
SOUTHERN CALIFORNIA EDISON COMPANY	)	Docket No.	ER97-2364-000

COMMENTS OF THE CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION ON THE PHASE II FILING OF THE ISO AND PX MADE BY THE ISO AND PX TRUSTEE ON MARCH 31, 1997

INTRODUCTION

The State of California's Energy Resources Conservation and Development Commission (hereafter "Energy Commission" or "CEC") submits these comments as a result of its participation as a stakeholder in the California Independent System Operator ("ISO") and California Power Exchange ("PX") Trust Advisory Committees and the Steering Committees that provided guidance in the preparation of the Trustee's Phase 2 filing.[1]

[1] Official comments of the State of California are being separately filed by the California Public Utilities Commission ("CPUC").

The Energy Commission strongly supports the creation of a competitive market for electricity in California, and, more particularly, we support Federal Energy Regulatory Commission ("FERC") approval of the new institutions that are necessary to allow that market to commence on January 1, 1998 in accordance with California law. We offer these comments in an effort to help the FERC find reasonable conditions upon which it can base an approval of the Phase 2 filing that has now been adopted by the California ISO and PX Governing Boards. The Energy Commission shares with FERC the concern that the market must be structured in a way that leads to efficient market solutions and that it must be fair to both large and small market players alike. At the same time, the Energy Commission believes that a well structured competitive market can do a better job of producing efficient, low cost energy for consumers than the traditional regulated monopoly market that has existed for the past century. We also believe that even if the market is not perfect when it is commenced, it is better to begin it in 1998, monitor it closely, and modify it as experience is gained than to wait for a higher level of theoretical perfection. We therefore encourage FERC to grant its approval for the market to commence on January 1, 1998, subject to appropriate conditions in the following areas:

- Direction for development of congestion management protocol and software
- Requirement for open public phasing plan for market changes
- Specification of market surveillance responsibilities and data requirements
- Adoption of market activity rules to achieve efficiency across separate markets

- Elimination of special PX price limit provision

Each of these considerations is addressed in the following comments, including specific solutions that FERC can implement with appropriate conditions while still granting approval for the market to proceed in a timely manner.

I. FERC SHOULD CONDITION APPROVAL OF THE ISO ON THE DEVELOPMENT, BY A SPECIFIC DATE, OF AN EFFICIENT CONGESTION MANAGEMENT PROTOCOL, TOGETHER WITH ALL OF THE SOFTWARE REQUIRED TO IMPLEMENT THAT PROTOCOL.

The California electric power market model is the first in the world to separate the function of power pool (PX) from the function of system operator (ISO). This separation has been agreed to by California regulators and the California Legislature in response to the overwhelming preferences of major market participants. It has also been tentatively approved by FERC in its November 26,1996 decision. 77 FERC & 61,204 at p. 61,808. Nevertheless, in order to maintain this bipartite relationship, a complex, multi-step, iterative method of managing potential congestion of the transmission system has evolved. Its operational complexity raises legitimate questions as to whether the system will unduly sacrifice efficiency or be unfair to some market participants.

The market is designed to operate on a daily basis with 24 settlement periods. The PX conducts an iterative-bid energy auction for the next day and submits a preferred schedule to the ISO based on the result of that auction. Other Scheduling Coordinators ("SCs") also submit preferred schedules to the ISO at the same time based on the needs of

the energy buyers and sellers that they represent. Both the PX and the other SCs are required to submit "balanced" schedules, that is, schedules with equal demand and supply. The ISO combines all of the preferred schedules, and if there is no transmission congestion, all such schedules are simply implemented. If there is transmission congestion, the ISO needs a way to decide which schedules should be decremented (in the "export" zone) and which should be incremented (in the "import" zone). This is done through "Adjustment Bids" which allow both PX and direct access buyers and sellers an equal opportunity to express their economic preferences in the event that congestion management is necessary.

Through these Adjustment Bids, the ISO will determine an effective market clearing price for energy in each zone, and those who use the congested path will pay the difference between those prices. If no Adjustment Bid is submitted, a buyer or seller is simply a price taker with respect to use of the path. The ISO will calculate the anticipated cost of using the congested path and will inform the market of this Usage Charge at least once before the market closes so as to allow the market to solve for congestion in its own way if the Usage Charge is deemed excessive.

The Energy Commission has identified the following three substantive issues and one technical issue with respect to the congestion management scheme that appears in the ISO Tariff.

A. The ISO Should Either Solve For Congestion Across All Scheduling Coordinator Schedules or Create a Mechanism that Allows the Market to Find a Similarly Efficient Solution

In its November 26, 1996 decision tentatively approving the California market model with its separation of the ISO and PX, FERC gave particular attention to the need for a market that is efficient, and indicated its expectation that the ISO would have adequate authority to ensure an efficient dispatch. FERC appropriately stated that: "we will require that the ISO be allowed to use all information it receives in order to develop a least cost schedule (for energy and ancillary service) in performance of its responsibilities to efficiently manage congestion and satisfy its control area responsibilities." 77 FERC & 61,204, at p. 61,810.

The Phase 2 filing arguably falls short of this requirement. For example, ISO Tariff section 7.2.2.3 requires the ISO to "maintain separation between the resource portfolios of different Scheduling Coordinators, by not arranging any trades between Scheduling Coordinators as part of the Inter-Zonal Congestion Management process." Similarly, section 7.2.2.6 states that in managing congestion, the ISO will "maintain separation between the resource portfolios of different Scheduling Coordinators as part of the Inter-Zonal Congestion Management Process." This means that even though the ISO will be receiving "Adjustment Bids" for the loads and resources of the various SCs,

reflecting their economic preferences regarding the price at which they are willing to be incremented or decremented in the event of congestion between zones, the ISO is not permitted to use those Adjustment Bids to create a single market clearing price that uses all loads and resources in economic merit order. Rather, the ISO must only increment and decrement loads and resources *within* each SC portfolio so as to maintain balanced schedules within each portfolio, resulting in multiple market clearing prices, scheduling of higher cost resources ahead of lower cost resources, and a potentially inefficient result.[2]

During the course of the discussion of the Phase 2 filing, the Energy Commission addressed this problem and pointed out that only the ISO will have access to all of the Adjustment Bids of all SCs because those bids are considered confidential market information that is not to be disclosed publicly without the approval of the bidder. The Energy Commission representatives on the Trust Advisory Committee ("TAC") proposed that the ISO instead use the Adjustment Bids to create a true market-wide merit order stack and at least provide the result to the SCs as a "Suggested Adjustment Schedule," after which the SCs would be permitted an iteration to adjust their schedules in any way they chose in an effort to eliminate congestion. The SCs would not be required to trade with one another according to the Suggested Adjustment Schedule so provided by the ISO, but they would at least have some indication what trades a neutral observer, having all the Adjustment Bids before it, would make in order to eliminate congestion

[2] By contrast, in performing intra-zonal congestion, the ISO is required to use a "merit order stack . . . such that less expensive resources will be the first to be incremented when Generation must be increased,

efficiently. The Energy Commission's representatives proposed that if the SCs did eliminate congestion after the iteration, regardless of how they did it, the ISO would take no further action. If, on the other hand, the SCs did not eliminate congestion, then the Energy Commission's representatives proposed that the ISO would use the merit order Suggested Adjustment Schedule as a default basis for managing congestion.

Several market participants objected that this proposal put the ISO in the position of directing market outcomes for economic reasons rather than merely operating the transmission system and leaving economic outcomes to the competitive market. They proposed that an alternative method of reaching an efficient solution would be to have the ISO simply place the Adjustment Bids on a bulletin board in coded form so that SCs could arrange their own trades without having the ISO participate as a decision-maker. The Energy Commission's representatives asked how SCs would be able to trade with one another if their Adjustment Bids were coded, and the immediate response was that traders do not need to know who they are dealing with. It was noted that in buying and selling mutual funds, a neutral broker matches buyers and sellers in a bid-asked market format without ever identifying the traders to one another.

As a result of this discussion, the TAC decided to institute a system of publication of coded Adjustment Bids and the facilitation of a Abid-asked@ market by

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and more expensive resources will be the first to be decremented when Generation must be decreased." ISO Tariff section 7.2.6.1.2.

the ISO in order to provide the information and mechanism necessary to allow Scheduling Coordinators to find economic solutions while still respecting the confidentiality of Adjustment Bids and the identity of such bidders. This decision was reflected in the March 13th draft of the ISO Tariff that was distributed to the TAC members as follows:

> **7.2.4.1.5** To facilitate trades amongst Scheduling Coordinators, the ISO will develop procedures to publish, in a coded format, individual Adjustment Bids submitted by Scheduling Coordinators. Scheduling Coordinators will then be able to notify the ISO of the Adjustment Bids that they wish to utilize as trades to aid Congestion Management.

Although this solution did not fully implement the recommendation of the Energy Commission's representatives, we accepted this solution as a reasonable compromise that should provide an efficient solution in most cases.

In spite of this agreement by the TAC, captured in the March 13th draft, this feature was later edited out of the final submittal to FERC. The Trustee=s letter, in the Executive Summary (at page 15) refers obliquely to this feature in a way that leaves unclear how the original problem will now be addressed. The Trustee's letter states:

> "The ISO would also disseminate *in coded form* the adjustment bids received from the various Scheduling Coordinators *or the actual offers, where the offerors have consented*."

(emphasis added). But the tariff language FERC now has before it to implement this promise expresses a very different intent, limiting publication of Adjustment Bids to those where the SC has authorized release of the bidder's identity and eliminating any suggestion that the ISO will act as a neutral broker to bring buyers and sellers together in

the manner of a bid-asked market. The new language, shown as it was edited from the March 13th version, is as follows:

> **7.2.4.1.5** To facilitate trades amongst Scheduling Coordinators, the ISO will develop procedures to publish~~, in a coded format, individual~~ Adjustment Bids ~~submitted by~~ of those Scheduling Coordinators who authorize the publication of their identity and/or Adjustment Bids. Scheduling Coordinators will then be able to ~~notify the ISO of the Adjustment Bids that they wish to~~ utilize this information to conduct ~~as~~ trades to aid Congestion Management.

The amendments represent fundamental change in what the TAC agreed should be implemented. First, the concept of coded publication to protect the confidentiality of bids is eliminated. Second, under the language of the filing, the ISO will only publish those Adjustment Bids of parties who authorize such publication, and there is a suggestion that they must agree to reveal their identity in order to have the bid published. Third, all language suggesting that the ISO will act as a neutral broker of a "bid-asked" market is gone, making it necessary for parties to reveal their identities if they want their bids to be made useful in the market. The result is that the entire concept agreed to, and even referenced in the Executive Summary, is missing from the tariff. This is reinforced by a subtle change in section 7.2.2.3 which, in the March 13th version, had prohibited the ISO from "obliging" any trades between SCs, but which now prohibits the ISO from "arranging" any such trades, thus arbitrarily and inefficiently constraining the ISO function. Since the word "arranging" is not defined, it appears that this prohibition prevents the ISO from taking any action that would assist SCs in finding one another based on their reaction to published coded bids. Yet at the March 5th TAC meeting, when the question was raised how bidder would find one another if their bids were

published in coded form, the answer was that neutral brokers deal with that every day in the mutual fund market and many other "bid-asked" markets. The understanding of the TAC on March 5th was that the ISO would perform this function.

FERC can require the efficient market solutions that it sought in its November 26th order in one of two ways. First, it could require the ISO Tariff to be amended to eliminate altogether the maintenance of separation of SC portfolios for purposes of Inter-Zonal Congestion Management. Thus the ISO would arrange trades among SCs based on their Adjustment Bids when necessary to achieve an efficient dispatch when Inter-Zonal Congestion must be managed. Second, if the FERC agrees with those who believe this solution places the ISO inappropriately in the position of determining market outcomes (even though it is really the Adjustment Bids that determine those outcomes with the ISO merely applying a mechanical procedure to place those bids in merit order), the FERC could condition its approval on the establishment of the coded bid bulletin board discussed by the TAC and the implementation of a bid-asked market, allowing SCs to find and make efficient trades with one another without identifying those who submit Adjustment Bids.

The Energy Commission believes that the preferred solution is the latter, not only because it has emerged as the consensus of debate but because it represents a variant of a known and tested trading system used in financial markets worldwide. It also reinforces the role of the ISO as a system manager, not an economic manager. We therefore suggest

that this solution be provisionally implemented with a review scheduled by FERC in two years after a period of market activity can be used to test the solution's performance and efficiency.

B. If FERC Allows the ISO Tariff to Require the ISO to Maintain Separation Between the Portfolios of Scheduling Coordinators, FERC Should At Least Require the Tariff to Allow the ISO to Provide an Option of Coordinated Congestion Management to Those Scheduling Coordinators Who Request It.

Section 7.2.5.2.1 of the ISO Tariff requires the ISO to "keep each Scheduling Coordinator=s portfolio of Generation and Load (i.e., the Scheduling Coordinator=s Preferred Schedule) separate from the portfolios of the other Scheduling Coordinators, as the ISO adjusts the Schedules to alleviate Inter-Zonal Congestion." This provision implements the desire of market participants to avoid mandatory rescheduling by the ISO for economic reasons and to maximize their own choice through the publication of coded bids and implementation of the Abid-asked@ market mechanism discussed above. Some SCs, however, might appreciate having the option of requesting the ISO to aggregate their schedules with those of other SCs for purposes of congestion management. Creation of this option is entirely harmless because no SC is required to ask for it, but those who do request it may have efficient trades arranged with other SCs who also request this service.

If FERC decides to allow the ISO Tariff to restrict the ISO's ability to use the Adjustment Bids from different portfolios to manage Inter-Zonal Congestion, it should at least consider requiring the addition of a proviso to ISO Tariff section 7.2.5.2.1 that would allow the ISO to combine the schedules of those SCs who specifically request that treatment. Section 7.2.5.2.1 could be so amended as follows:

> **7.2.5.2.1** Inter-Zonal Congestion Management will keep each Scheduling Coordinator=s portfolio of Generation and Load (i.e., the Scheduling Coordinator=s Preferred Schedule) separate from the portfolios of the other Scheduling Coordinators, as the ISO adjusts the Schedules to alleviate Inter-Zonal Congestion except to the extent that Scheduling Coordinators request the ISO to aggregate their Schedules with those of other Scheduling Coordinators for congestion management purposes. Where two or more Scheduling Coordinators request the ISO to arrange economically advantageous trades between them and other Scheduling Coordinators based on Adjustment Bids, and where the ISO can do so in the process of elimination Inter-Zonal Congestion, the ISO shall aggregate the Schedules of all such requesting Scheduling Coordinators and arrange feasible trades as requested.

C. FERC Should Require Limitations on the Ability of Those Who Submit Adjustment Bids to Modify Those Bids So As To Limit Opportunities for Gaming and Move the Bidders Toward an Efficient Congestion Management Solution.

ISO Tariff section 7.2.4.2.4 provides: "Adjustment Bids that have not been accepted by the ISO can be revised by Scheduling Coordinators after the Day-Ahead Market has closed for consideration in the Hour-Ahead Market and, after the Hour-

Ahead Market has closed, for consideration in the Real Time Market." This provision is appropriate to permit Scheduling Coordinators to respond to ISO suggested schedule revisions (provided pursuant to section 7.2.4.2) and the advisory tentative Usage Charge information (provided pursuant to section 7.2.5.2.9) in ways that will help move the system toward a convergent Inter-Zonal Congestion Management solution. It is arguably not appropriate, however, to allow bidders to change their bids in ways that make it harder to reach such a solution. Just as the energy market conducted by the PX has rules that move the bidders inexorably toward an efficient solution, there should be rules to guide the modification of Adjustment Bids in the ISO=s Congestion Management market.[3]

To solve this problem, the Energy Commission suggests that FERC could condition approval of the ISO Tariff on revision of section 7.2.4.2.4 to add the following underlined proviso:

> **7.2.4.2.4** Adjustment Bids that have not been accepted by the ISO can be revised by Scheduling Coordinators after the Day-Ahead Market has closed for consideration in the Hour-Ahead Market and, after the Hour-Ahead Market has closed, for consideration in the Real Time Market, provided that such revisions improve the ease with which the ISO can manage Inter-Zonal Congestion. An Adjustment Bid will be deemed to improve the ISO=s ability to manage Inter-Zonal Congestion if, on the import (higher cost) side of the Inter-Zonal Interface, it (1) lowers the price of incremental supply, or (2) reduces the quantity demanded, and/or

[3] The Trustee employed Professor Robert Wilson in January to develop bid activity rules for the PX energy auction, but due to limitations of time, did not initially ask that this work be extended to the congestion management and ancillary services markets conducted by the ISO. Since the filing was made, Professor Wilson has been employed to consider how these markets can be made to work with one another efficiently, but his solutions have not been publicly available to date. The Energy Commission offers a solution based on his previous work while recognizing that FERC may be able to craft a more elegant solution once his work is complete and has been publicly reported.

if, on the export (lower cost) side of the Inter-Zonal Interface, it (3) lowers decremental supply bids.

D. A Technical Correction is Required in ISO Tariff Section 7.2.2.5

The March 13th version of ISO Tariff section 7.2.2.5 provided: "for Intra-Zonal Congestion Management, adjust Scheduling Coordinators= Schedules to minimize the cost of alleviating Congestion, but only to the extent needed to relieve Congestion." The final Phase 2 filing version added the phrase (at the end): "and not to create Intra-Zonal Congestion." The addition of this phrase makes the provision unintelligible. Either the authors intended the phrase to read: "and not to create Inter-Zonal Congestion" or the phrase meaninglessly provides that the ISO will not create Intra-Zonal Congestion while managing Intra-Zonal Congestion. The Energy Commission suggests that language return to the March 13th version and delete the ambiguous phrase "and not to create Intra-Zonal Congestion."

II. FERC SHOULD CONDITION APPROVAL OF THE ISO AND PX ON THE DEVELOPMENT AND MAINTENANCE OF A PUBLIC PHASING PLAN OF SPECIFIC COMMITMENTS TO MAKE CERTAIN CHANGES TO THE MARKET AT SPECIFIC TIMES.

For the past several months, as the Trustee has focused on the difficult goal of commencing market operation by January 1, 1998 in accordance with state law, many issues have had to be resolved in the most expedient manner with the understanding that changes may be required by the ISO and PX Governing Boards, by FERC conditions on approval, or by experience with the market once it commences operation. In addition,

some functionality in the hardware and software has been intentionally deferred to allow the market to commence as required by law, and additional phases of development are contemplated during 1998. In the rush to begin, however, there has been very uneven access to information on the changes that are likely to occur in the future. As a result, some competitors are put at a disadvantage and may make investments in reliance on a start-up market structure that may unexpectedly change within a short period of time.

Consistent with the concept of allowing the market to begin operation subject to the probable need to make changes in the future, FERC should direct the ISO and PX to submit and periodically (either monthly or quarterly) update a publicly available phasing plan for staged implementation of the restructured market. Such a plan would establish specific times for changes in tariffs, protocols, and implementing software to occur so that those who advocate (or require through regulatory action) improvements in the market could have confidence that these changes are not only intended at some indefinite time but are scheduled to occur on specific dates. The plan would also make interested parties aware of intended changes as early as possible, thus helping to avoid unwarranted investments by market participants in reliance on a market configuration that will soon change. The plan could serve both to encourage the proposal and development of improvements by removing the 1/1/98 start-up deadline as an obstacle to their consideration, and also to enforce a disciplined approach to changes so that all affected parties would have both an opportunity to comment on proposals to add items to the plan and to know when the plan has changed.

Requirement of a public phasing plan process of implementing changes to the market will be helpful to FERC in allowing the market to commence on January 1st even if FERC wishes to require improvements that cannot be implemented within that constrained time schedule. FERC may decide to hold technical conferences later this year to explore the time required to make certain software changes that FERC wants to require even if they cannot be implemented by January 1, 1998. If such changes are desirable but not fundamentally required to allow the market to begin, FERC could then condition approval on the commitment, in the public plan, to make such changes by specific dates. The plan will also serve as the focus for requests by state agencies and market participants for changes that could not be incorporated in the original market structure.

III. FERC SHOULD CONDITION APPROVAL OF THE ISO AND PX UPON THEIR AGREEMENT TO SHARE BID INFORMATION WITH THE ENERGY COMMISSION AND THE PUBLIC UTILITIES COMMISSION SUBJECT TO APPROPRIATE PROTECTION OF THE CONFIDENTIALITY OF TRADE SECRETS.

The Phase 2 filing makes no attempt to claim that California will have a perfect competitive electricity market on January 1, 1998. Instead, it tries to convince FERC that the market structure proposed will be good enough to allow the market to commence as proposed, and it makes a firm commitment to address market imperfections by establishing an institutional framework for detecting market anomalies that require mitigation or changes in market structure. Appendix 7 of the ISO filing describes some of the market surveillance activities that compliance divisions of the ISO and PX might

undertake to detect aberrant market behavior, discover design flaws in the rules and protocols, determine if facilities have been mischaracterized as must-run, and identify recurrent or persistent gaming that adversely effects the overall efficiency of the market and its fairness to other market participants. The Energy Commission supports the thoughtful approach described in Appendix 7 and proposes a condition that will help to give both FERC and the general public greater confidence that these market surveillance activities will be robust and will be carried out in an objective manner, free from the influence of any member of the ISO or PX Governing Board and even from the management of the corporations.

Specifically, the Energy Commission requests that FERC condition its approval of the ISO and PX operation on January 1, 1998 upon the agreement of those organizations to share all of the market data described in Appendix 7 with the Energy Commission and the Public Utilities Commission, subject to appropriate agreements and procedures for safeguarding the confidentiality of commercially sensitive information such as raw bid data. We note with appreciation both the recognition in Appendix 7 of the work of the Energy Commission's Forecasting and Resource Assessments Division and several general expressions of intent that the compliance divisions will work cooperatively with regulatory agencies. We propose that these statements can be improved by the more specific understanding that FERC approval is conditioned upon the ability of independent agencies of the State of California to follow the market as closely as the compliance divisions themselves.

Such a condition of approval is necessary and appropriate for several reasons. First, while the Energy Commission is charged with responsibility under state law to "serve as a central repository within the state government for the collection, storage, retrieval, and dissemination of data and information on all forms of energy" (Public Resources Code ' 25216.5(d)) and to "undertake a continuing assessment of trends in the consumption of electrical energy and other forms of energy and analyze the social, economic, and environmental consequences of these trends" (Public Resources Code ' 25216(a)), the Energy Commission is not a regulatory agency except with respect to its responsibilities in the licensing of power facilities. The Energy Commission has developed a strong analytic capability which it uses to provide independent energy policy advice to the Governor, the California Legislature, the California Public Utilities Commission, and the FERC, but it has no direct regulatory responsibility over the ISO, the PX, or any market participant except for those who may wish to build new facilities (i.e. thermal powerplants with capacity in excess of 50 MW and related facilities). From this unique position of strength in understanding the electricity market but lack of direct regulatory control, the Energy Commission can assist the ISO, the PX, and FERC by providing independent and unbiased market oversight and thereby strengthening the public's confidence in the fairness of the market. In addition, while the CPUC will retain some regulatory responsibilities over the new competitive market, the ISO and PX are regulated primarily by FERC and may develop a reluctance to share market information even with the CPUC. A FERC condition requiring sharing of such information can ensure

more in depth defense against practices that are against the public interest and that might go unnoticed if the information is kept between the ISO, PX, and FERC.

The ISO and PX will also benefit from agreeing to work cooperatively with the Energy Commission and the Public Utilities Commission in sharing market information in that this will provide a higher level of public confidence in their administration of the market. It would also allow the Energy Commission to provide a number of useful services to the ISO and PX that will help keep the costs of these organizations at reasonable levels. This is especially important during the first few years of the market while the new organizations will need to collect a rate uplift that amortizes the development costs of the hardware and software necessary to allow the market to function. For example, the Energy Commission already performs detailed electricity demand forecasts and maintains extensive information on the capabilities of generation and transmission facilities. Rather than duplicating functions the Energy Commission already performs for state government, and which are already paid for by California electricity consumers, the ISO and PX should consider relying upon the Energy Commission to provide some of the information and analysis that they need to disseminate to market participants. Through a cooperative working relationship, the ISO, PX, Public Utilities Commission, and Energy Commission can also produce a more efficient, effective, and convincing market surveillance function, allowing substantial resources to be deployed to support this activity without requiring the early expenditure of large sums to build extensive compliance divisions in each of the new organizations.

Should FERC approve the ISO and PX without requiring them to share market information with the Energy Commission and Public Utilities Commission, a weaker competitive market would likely result. The Commissions could still seek to obtain the information by agreement with the ISO and PX, but under this scenario, the Commissions' analysis and public reporting of findings and recommendations for market changes would be chilled by the knowledge that the ISO and/or PX might seek to withdraw access to critical market data if the Commissions' recommendations offend influential members of the Governing Board(s). Because the Commissions are not market participants and would use market data only for a variety of public interest purposes, they are in a unique position to be helpful partners to FERC in its regulatory oversight of the California competitive market. We therefore request FERC to recognize the potential value of that partnership by imposing this condition.

IV. THE FERC SHOULD CONDITION APPROVAL OF THE ISO AND PX ON COMPLETION, BY A SPECIFIC DATE, OF BIDDING INFRASTRUCTURE AND RULES THAT WILL ACHIEVE EFFICIENT SOLUTIONS ACROSS SEPARATE MARKETS.

Perhaps the greatest weakness in the California market model represented in the March 31st filings is the lack of clear market rules that can be predicted, with confidence, to produce efficient solutions across the separated PX energy market and the ISO ancillary services and congestion management markets. The ISO and PX answers to questions 17 and 20 of the questions propounded by FERC on April 29th, for example,

forthrightly admit that the answers to FERC's detailed questions about how an efficient solution will be found when Inter-Zonal Transmission Congestion Management requires modification of PX schedules will not be available until after the PX has obtained some market experience.

This is a serious problem. Professor Robert Wilson has developed an elegant auction solution for the PX that accommodates the desire of many market participants to use a one part bid format, guiding the bidders through several iterations designed to achieve price discovery of an efficient market clearing price. He has also assisted the Trust in simplifying and making efficient the bidding and acceptance rules for Ancillary Services for both the ISO and PX, as noted in the report attached to the May 20th response to FERC's April 29th questions. These solutions, however, do not yet address the reality that the ISO may determine, after the PX auction, that due to congestion, additional adjustments are necessary that disrupt the expectations created within the PX auction. Professor Wilson is still working with the Trust in an effort to resolve these problems, but the Trust has not indicated when his work will be available for public review. The Energy Commission suggests that FERC convene a technical conference on this subject to explore both solutions that can be implemented by January 1, 1998 and, if necessary, additional options that may require more time for software development. Based on the results of the technical conference, FERC may find appropriate conditions for approval of the ISO and PX that will ensure efficiency across separate markets.

V. FERC SHOULD CONDITION APPROVAL OF THE PX ON DELETION OF THE SPECIAL PX PRICE LIMIT RULE IN SECTIONS 2.5.2 AND 6.5.4 OF THE PX TARIFF.

Late in the process of developing the PX filing, the Trustee proposed a price limit rule for the Bonneville Power Administration ("BPA"). This is now reflected in PX Tariff sections 2.5.2 and 6.5.4 which gives the PX authority to find that a Metered Entity has the potential to exercise market power and, upon such finding, to limit the price that entity may receive from the PX under specified market conditions.

The tariff proposes to give the PX authority to pay a lower price to a PX Participant who represents a Metered Entity who the PX has found "has the potential to exercise significant market power in relation to sales of Energy through the PX." (PX Tariff section 2.5.2.). Section 6.5.4 states that the price limit shall have effect when the sales of such a Metered Entity "through the PX account for more than 25% of total generation, excluding Regulatory Must-Take, Regulatory Must-Run, and Reliability Must-Run Generation, sold through the PX in that settlement period." In one sense, the rule is well crafted in that it does not directly single out BPA and could, theoretically, apply to other large holders of generation both within and without California. But whether it is facially discriminatory or not, it is questionable whether the rule will work as it is intended or whether, instead, it will have the unintended effect of damaging the long-term viability of the PX as an institution.

The rule allows the PX to demand of every PX Participant who has purchased energy from a Metered Entity subject to the rule during a relevant settlement period "satisfactory evidence" that any Market Clearing Price in a Preliminary Settlement Statement should not be adjusted downward due to the existence of lower priced comparable bilateral sales from the affected Metered Entity. This duty may even extend to those who have purchased energy from others who, in turn, have dealt with the affected Metered Entity. Indeed, how far this difficult-to-trace chain of title in the energy of an affected Metered Entity will need to go is not clear, but it seems to raise enormous potential for increased administrative cost and litigation over the application of the rule.

Suppose, for example, that a utility in the Pacific Northwest purchases 500 MWh of energy to serve anticipated loads--100 MWh each from five suppliers, including one who the PX has identified as having the potential to exercise significant market power in relation to sales of Energy through the PX. Later in time, as a result of changes in weather or other demand reducing events, this utility finds it must lay off 100 MWh of this energy. If the power is offered to the PX, will the utility be assumed to be "representing" the affected Metered Entity, thus allowing the PX to pay a lower market clearing price to the utility if it turns out that when all such energy (from the affected Metered Entity) is aggregated, it amounts to more than 25 percent of the competitive generation flowing through the PX in that hour? Will the lower market clearing price be applied to the entire 100 MWh or only to a proportional share of it (i.e. 20 MWh)? If some of the other

entities the utility has purchased from have also dealt, directly or indirectly, with the affected Metered Entity, will some or all of that energy also be affected by the price limit rule? Most important, does the possible after-the-fact application of the rule to entities who sell energy through the PX, as a result of facts the entities may not have even known when they were arranging a series of energy trades, make the PX a very unattractive place to do business?

The purpose of this rule is understandable and laudable--it is designed to avoid having large energy sellers who can have a significant affect on the PX Market Clearing Price to reap substantially higher rewards than they would in a competitive market that did not set the price according to a formula as predictable as the merit order system employed by the PX. The problem is that having established such a system, efforts to make it inapplicable to certain large suppliers are bound to create a huge incentive to find creative ways of exploiting the difference between the Market Clearing Price paid to most suppliers and the lower price this rule would allow. For example, an affected Metered Entity might agree to sell energy to power marketers at 80 percent of the ex post PX Market Clearing Price. After trading the energy among various entities several times, some or all of the energy would likely be offered to the PX. To the extent that the PX failed to identify the source of the energy and thus failed to apply a lower price to it, the strategy would have succeeded and the Metered Entity would receive 80 percent of the Market Clearing Price while its marketer customers would divide the other 20 percent.

If it is assumed, however, that enforcement of the rule will be 100 percent effective, then the rule may be even more damaging to the PX as an institution. In this case, the affected Metered Entity has an incentive to sell power through any alternative power pool (let us call it "CPX" or "Cheaper Power Exchange") that may offer a higher price than the price limit rule would allow. When large blocks of low cost energy leave the PX and are bid, instead, into CPX, the anticipated result would be that the PX price would be higher. This would give loads that are free to trade in alternative pools an incentive to leave the PX and trade in CPX where the large blocks of low cost energy from the affected Metered Entity are being offered (perhaps at 80 percent of the ex post PX Market Clearing Price). Under such a rule, the PX will likely only survive so long as the CPUC requires the investor-owned utilities in California to purchase power to serve their loads from the PX.

The survival of the PX is important for at least three reasons. First, the PX is the only market entity that is required regularly to report a market clearing price to the public so that both large and small market participants alike can have a benchmark by which to evaluate other market options. Second, the PX is a public benefit non-profit corporation, whose performance in the market will serve as a yardstick for measuring whether competing Scheduling Coordinators are reaping undue profits due to the exercise of market power. Finally, somewhere between $60 and $80 million has been invested in the infrastructure and start-up costs of the PX. If the PX is required to employ market rules

that discourage its use, some portion of this investment may become a stranded investment which cannot be amortized through an uplift charged by the PX.

In sum, FERC should require the PX to eliminate the special price limit rule from its tariff, both because the rule will be difficult, if not impossible, to enforce, and also because, to the extent that the rule is successfully enforced, it may seriously discourage use of the PX, particularly in the long term.

CONCLUSION

Under the auspices of the California ISO and PX Trust, a great deal of progress has been made in preparing for the commencement of a competitive electricity market in California on January 1, 1998 in accordance with California law. The California Energy Commission supports the approval of the ISO and PX with appropriate conditions designed to address the problems identified in these comments.

Respectfully submitted,

California Energy Resources Conservation and Development Commission

By:_____
William M. Chamberlain
Chief Counsel